APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/698,138	10/30/2003	Juan-Antonio Carballo	AUS920030656US1	3491

			EXAMINER
45502	7590	10/31/2006	PIERRE LOUIS, ANDRE

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ART UNIT	PAPER NUMBER
2123	

DATE MAILED: 10/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

	Application No.	Applicant(s)
Office Action Summary	10/698,138	CARBALLO, JUAN-ANTONIO
	Examiner	Art Unit	
	Andre Pierre-Louis	2123	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-22* is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on <u>03 November 2003</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☒ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date <u>11/03/2003</u>.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

1.   Claims 1-22 have been presented for examination.

Drawings

2.   The drawings are objected to under 37 CFR 1.83(a) because they fail to show

details as described in the specification (*see for example fig.1*). Any structural detail

that is essential for a proper understanding of the disclosed invention should be shown

in the drawing. MPEP § 608.02(d). Corrected drawing sheets in compliance with 37

CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the

application. Any amended replacement drawing sheet should include all of the figures

appearing on the immediate prior version of the sheet, even if only one figure is being

amended. The figure or figure number of an amended drawing should not be labeled as

"amended." If a drawing figure is to be canceled, the appropriate figure must be

removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several

views of the drawings for consistency. Additional replacement sheets may be necessary

to show the renumbering of the remaining figures. Each drawing sheet submitted after

the filing date of an application must be labeled in the top margin as either

"Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are

not accepted by the examiner, the applicant will be notified and informed of any required

corrective action in the next Office action. The objection to the drawings will not be held

in abeyance.

Claim Rejections - 35 USC § 101

3.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

The claimed invention as a whole must accomplish a practical application. That is, it must produce a "useful, concrete and tangible result." State Street, 149 F.3d at 1373, 47USPQ2d at 1601-02. The purpose of this requirement is to limit patent protection to inventions that possess a certain level of "real world" value, as opposed to subject matter that represents nothing more than an idea or concept, or is simply a starting point for future investigation or research (Brenner v. Manson, 383 U.S. 519, 528-36, 148 USPQ 689, 693-96); In re Ziegler, 992, F.2d 1197, 1200-03, 26 USPQ2d 1600, 1603-06 (Fed. Cir. 1993)). Accordingly, a complete disclosure should contain some indication of the practical application for the claimed invention, i.e., why the applicant believes the claimed invention is useful. However, the mere fact that the claim may satisfy the utility requirement of 35 U.S.C. 101 does not mean that a useful result is achieved under the practical application requirement. The claimed invention as a whole must produce a "useful, concrete and tangible" result to have a practical application.

3.0   Claims 1-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. The claims do not produce a useful, concrete, and tangible result. Furthermore, 19-22 do not fall into one the four statutory classes. *See MPEP 2106 [R2]*

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains.
Patentability shall not be negatived by the manner in which the invention was made.

4.0   Claims 1-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over

Andrea Jo Goldsmith (referred to herein as Goldsmith), in view of Fan et al. (U.S. Patent

No. 7,093,172).

4.1   In considering the independent claims 1 and 10, Goldsmith substantially

teaches a system for designing a communication link for use in a data processing

system, comprising: a parameter generator configured to permit a user to specify a first

set of parameters associated with the communication link and further configured to

derive a set of internal parameters from the first set of parameters (pg.44-50); an

internal link model comprising a set of configurable link cells, wherein the internal link

model is configured to receive the derived set of internal parameters and to instantiate

each link cell in the set of link cells based on the internal parameters (see pg. 44-50);

and means for modeling a bit error rate (BER) of the instantiated communication link

(see pg.39,44-54). Although Goldsmith does not clearly teaches the term parameter

generator, one ordinary skilled in the art would appreciate the channel estimator

teaches by Goldsmith to generate the parameters. Nevertheless, Fan et al. substantially

teaches a PRBS generator (see fig.2, 4a, 5,7). Goldsmith and Fan et al. are analogous

art because there are from the same field of endeavor and that system and method

teaches by Fan et al. is similar to that of Goldsmith. Therefore, it would have been

obvious to one ordinary skilled in the art at the time of the applicant's invention to

combine the PRBS generator of Fan et al. with the system of Goldsmith because Fan et

al. teaches improvement of transmission characteristics of information, which may be.

transferred across a communication link (see col.13 lines 23-32).

4.2   Regarding claims 2, 11, and 22, the combined teachings of Goldsmith and

Fan et al. substantially teach the an estimator configured to estimate the area and

power consumption based on the user specified set of first parameters (see Goldsmith

pg.44-54, 71-77).

4.3   As per claims 3 and 12, the combined teachings of Goldsmith and Fan et

al. substantially teach the means for modeling the BER includes a channel simulator   .

configured to receive the instantiated communication link from the parameter generator

and a media transfer function specified by the user, wherein the media transfer function

is indicative of a channel to which the instantiated link model is connected (see

Goldsmith pg.44-54; also see Fan et al. fig.1-2).

4.4   With regards to claims 4 and 13, the combined teachings of Goldsmith

and Fan et al. substantially teach the parameter generator prevents the user from

directly accessing the internal parameters and the generic link model (see Fan et al.

fig.2, 4a, 5,7).

4.5   Regarding claims 5 and 14, the combined teachings of Goldsmith and Fan

et al. substantially teach the first set of parameters includes link design parameters

selected from a set of parameters comprising a sampling complexity parameter, a loop

bandwidth parameter, and a loop order parameter (see Fan et al. fig.3-4, col.14 line 52-

col.15 line 11; also see Goldsmith pg.44-54).

4.6   As per claims 6 and 15, the combined teachings of Goldsmith and Fan et

al. substantially teach that the cells in the generic link model include a sampling latch

cell having a configurable sample rate and a sample memory having a configurable

memory size *(see Fan et al. fig.1, 3-4, col.14 line 52-col.15 line 11; also see Goldsmith*

pg.44-54).

.4.7   With regards to claims 7 and 16, the combined teachings of Goldsmith

and Fan et al. substantially teach that the cells in the generic link model further include

an edge detector, a phase controller, and a phase rotator, each having at least one

configurable parameter *(see Fan et al. fig.1, 3-4, col.14 line 52-col.15 line 11; also see*

Goldsmith pg.44-54).

4.8   As per claims 8 and 17, the combined teachings of Goldsmith and Fan et

al. substantially teach the power supply voltage is a configurable parameter of the

generic link model *(see Fan et al. fig.1, 3-4, col.14 line 11-col.15 line 11; also see*

Goldsmith pg.44-54).

4.9   As per claims 9, 18, and 20, the combined teachings of Goldsmith and

Fan et al. substantially teach that the system is further configured to permit the user to

specify a first operational parameter and an acceptable limit for a second operational

parameter, and still to configure to instantiate each link cell to obtain an optimal value

for the second parameter link constrained by the first operational parameter (*see*

Goldsmith pg.44-56; also see Fan et al. fig.1, 3).

4.10   With regards to claim 19, the combined teachings of Goldsmith and Fan et

al. substantially teach a service permitting a user to define a communication link

suitable for use in a data processing system, comprising: defining an internal model of a generic communication link, the internal model comprising a set of configurable communication link cells *(see Fan et al. fig.1, 3-4, col.14 line 11-col.15 line 11; also see Goldsmith pg.44-54)*; enabling the user to specify a first set of parameters associated with the communication link while preventing the user from accessing the internal model *(see Fan et al. fig.1, 3-4, col.14 line 11-col.15 line 11; also see Goldsmith pg.44-54)*; providing means for converting the first set of parameters to an internal set of parameters *(see Fan et al. fig.1, 3-4, col.14 line 11-col.15 line 11; also see Goldsmith pg.44-54)*; and providing means for using the internal parameters to configure an internal model of the communication link *(see Fan et al. fig.1, 3-4, col.14 line 11-col.15 line 11; also see Goldsmith pg.44-54)*.

4.11   As per claim 21, the combined teachings of Goldsmith and Fan et al. substantially teach the means for simulating a bit error rate of communication link *(see Fan et al. fig.4-5, col.19 line 35-col.20 line 35; also see Goldsmith pg.44-55)*.

Conclusion

5.   The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

5.1   Lau et al. (U.S. Patent No. 6,973,600) teaches a bit error rate tester.

6.   Claims 1-22 are rejected and this action is non-final. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre Pierre-Louis whose telephone number is 571-272-8636. The examiner can normally be reached on Mon-Fri, 8:00AM-4:30PM.
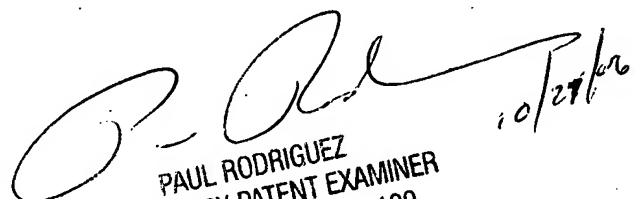
If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Paul L. Rodriguez can be reached on 571-272-3753. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

October 23, 2006

APL

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